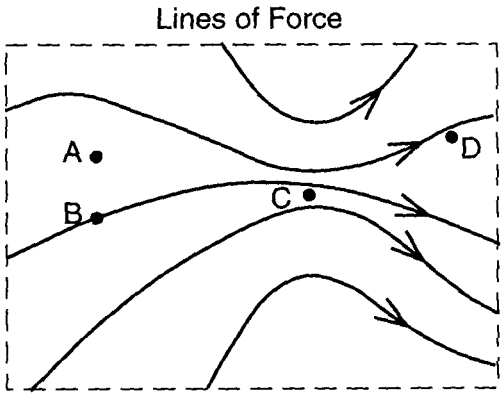
Regents Magnetism

1. The diagram below represents magnetic lines of force within a region of space.



The magnetic field is strongest at point

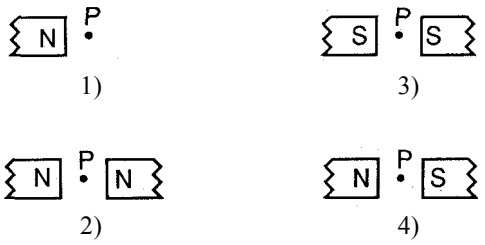
1) *A*

2) *B*

3) *C*

4) *D*

2. In which diagram below is the magnetic flux density at point *P* greatest?



3. A volt is to electric potential as a Tesla is to

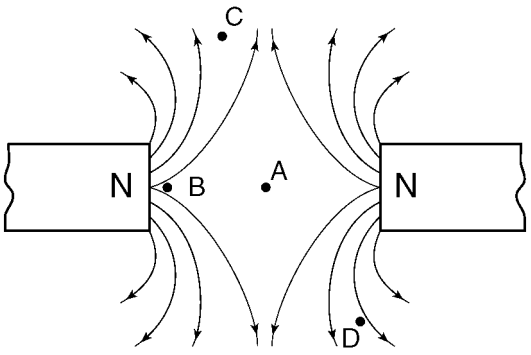
1) electrical energy

2) electric field intensity

3) magnetic flux density

4) charge density

4. The diagram below shows the lines of magnetic force between two north magnetic poles.



At which point is the magnetic field strength greatest?

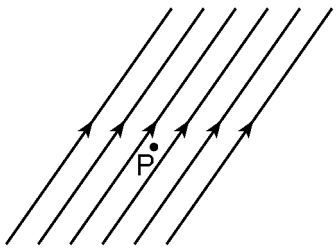
1) *A*

2) *B*

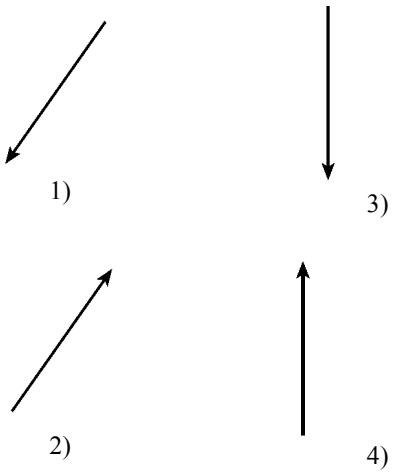
3) *C*

4) *D*

5. The diagram below represents the magnetic field near point *P*.



If a compass is placed at point *P* in the same plane as the magnetic field, which arrow represents the direction the north end of the compass needle will point?



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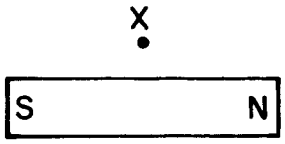
6. A compass is located at point *X* near a bar magnet as shown in the diagram below.



Which diagram shows the proper direction of the compass needle?

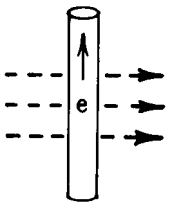
1)

3)

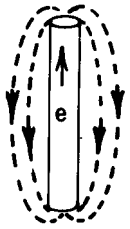
2)

4)

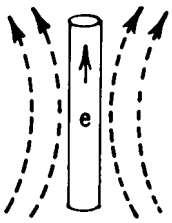
7. Which diagram best illustrates the magnetic field that exists around a current-carrying wire?



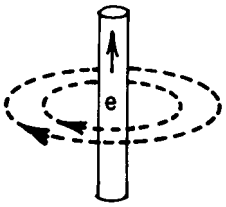
1)



3)



2)



4)

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Answer Key

1. 3
2. 4
3. 3
4. 2
5. 2
6. 2
7. 4